

BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C. 20554

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Federal Communications Commission  
Office of the Secretary

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In the Matter of )  
 )  
Advanced Television Systems )  
and their Impact on the )  
Existing Television Broadcast )  
Service )  
 )  
Review of Technical and )  
Operational Requirements: )  
Part 73-E, Television )  
Broadcast Stations )  
 )  
Reevaluation of the UHF )  
Television Channel and Distance )  
Separation Requirements of )  
Part 73 of the Commission's )  
Rules )

**MM Docket No. 87-268**

**To: The Commission**

**COMMENTS OF  
THE LAND MOBILE COMMUNICATIONS COUNCIL**

Joseph Y. Nasser  
President  
LAND MOBILE COMMUNICATIONS  
COUNCIL

By: John B. Richards  
Chairman  
Drafting Committee

Nina M. Binstein  
1150 17th Street  
Suite 1000  
Washington, D.C. 20034

0411

Dated: November 30, 1988

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**SUMMARY**

ATV can and should be developed within the massive 6 MHz bandwidths which broadcasters currently enjoy. By limiting ATV development to 6 MHz, the Commission can move forward with its long-standing UHF Sharing proceeding which will help alleviate the spectrum shortage faced by the Private Land Mobile Radio Services.

Should the Commission conclude that supplemental spectrum must be allocated for ATV, it should revisit the issue of permitted uses of such spectrum for non-ATV purposes while ATV technology develops. While LMCC applauds the Commission's concern that spectrum not lay idle, it urges the Commission to reconsider its proposal that use of the supplemental spectrum for non-ATV purposes be permitted for an interim period at the discretion of each broadcast licensee. Instead, the Commission should allocate the supplemental spectrum to non-broadcast eligibles such as land mobile radio users for a temporary but fixed period (e.g., 10 years). At the end of the adopted time frame, broadcast licensees would have access to the spectrum should it be needed for ATV. This plan serves the public interest to a far greater degree than the Commission's proposal, and would provide critical spectrum relief to the Private Land Mobile Radio Services while affording land mobile radio users the stability necessary for maximizing the use of these frequencies.

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**COMMENTS OF  
THE LAND MOBILE COMMUNICATIONS COUNCIL**

The Land Mobile Communications Council ("LMCC") is pleased to submit these Comments in response to the invitation of the Federal Communications Commission ("Commission") in the Tentative Decision and Further Notice of Inquiry in the above-captioned proceeding, released September 1, 1988 ("Notice").

**I. PRELIMINARY STATEMENT**

1. The Land Mobile Communications Council acts on behalf of the vast majority of public safety, business, industrial, land transportation and common carrier land mobile

radio users, as well as a diversity of land mobile service providers and equipment manufacturers. LMCC represents its membership before the Commission on a variety of communications issues. A partial list of LMCC's membership includes:

- American Association of State, Highway and Transportation Officials
- American Automobile Association
- American Petroleum Institute
- American SMR Network Association, Inc.
- American Trucking Association, Inc.
- Association of American Railroads
- Associated Public Safety Communications Officers, Inc.
- Cellular Telecommunications Industry Association
- Electronic Industries Association
- Forest Conservation Communications Association
- Forest Industries Telecommunications
- International Association of Fire Chiefs
- International Association of Fish and Wildlife Agencies
- International Bridge, Tunnel and Turnpike Authority, Inc.
- International Municipal Signal Association
- International Taxicab Association
- Manufacturers Radio Frequency Advisory Committee
- National Association of Business and Educational Radio, Inc.
- National Association of State Foresters
- Special Industrial Radio Service Association, Inc.
- Telocator Network of America
- United States Telephone Association<sup>1/</sup>
- Utilities Telecommunications Council

LMCC has participated in all stages of this proceeding, as well as in the related UHF-TV Sharing proceeding, General

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<sup>1/</sup> The United States Telephone Association did not participate in the preparation of these Comments.

Docket No. 85-172.<sup>2/</sup>

2. In its Notice, the Commission addresses various technical, economic, legal and policy issues associated with the development of Advanced Television ("ATV") technologies. A substantial part of the Commission's Notice pertains to spectrum allocation issues. Specifically with respect to spectrum allocation, the Commission concluded that if additional spectrum is needed for ATV, it must be found within the existing VHF and UHF TV bands. Also, the Commission announced four possible spectrum authorization plans for ATV: (1) no additional spectrum be utilized; (2) a 3 MHz channel not necessarily contiguous to the main channel be utilized to supplement the existing 6 MHz channels; (3) 6 MHz, not necessarily contiguous, be provided to augment the main channel; or (4) 6 MHz of spectrum be provided for simulcasting programs during the transition period. Additionally, the Commission requested comment on issues relating to the allotment and use of any supplemental channels which may be allocated for ATV, including the desirability and/or feasibility of allowing for flexible use of the supplemental spectrum while ATV technology is being developed.

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<sup>2/</sup> Notice of Proposed Rulemaking, In the Matter of Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, General Docket No. 85-172, 50 Fed. Reg. 25,587 (June 20, 1985).

3. LMCC has repeatedly urged the Commission to require that ATV systems be developed within the 6 MHz channel bandwidths already assigned to broadcasters, noting that this approach would enable the Commission to move forward with its long-standing UHF Sharing proceeding which promises to provide much needed spectrum relief for the Private Land Mobile Radio Services. Accordingly, LMCC is pleased to have this opportunity to respond to the spectrum allocation issues raised by the Commission in its Notice.

## II. COMMENTS

### A. ATV Systems Should Use No More Than the Existing 6 MHz Channel Bandwidths

4. ATV systems can and should be operated within the existing 6 MHz television bandwidths. As the Commission has observed, there are many techniques readily available to broadcasters to improve picture quality without requiring additional inputs of scarce radio spectrum. See Commission's Notice at pp. 15-17. Thus, it is clearly possible for ATV to be developed within the existing 6 MHz channel assignments available to broadcasters. This spectrum allocation plan also is desirable from the standpoint of spectrum efficiency and conservation. The private land mobile radio community is currently facing a critical need for additional frequencies. Rather than allocate

additional spectrum for ATV systems when such supplemental spectrum is unnecessary, the Commission should reserve certain UHF spectrum for shared use by private land mobile radio users.

5. In this proceeding and in the UHF Sharing proceeding, General Docket No. 85-172, supra, LMCC has described in detail, and filed extensive documentation which demonstrates, the needs of the land mobile community for additional spectrum. See, e.g., Comments and Reply Comments, General Docket No. 85-172, LMCC and LMCC member associations; LMCC Comments and Reply Comments, Notice of Inquiry, In the Matter of Advanced Television Systems and their Impact on the Existing Television Broadcast Service, MM Docket No. 87-268/RM-5811, 52 Fed. Reg. 34,259 (Sept. 10, 1987).<sup>3/</sup> Moreover, the critical need for additional spectrum through UHF sharing has been detailed repeatedly. As LMCC has previously explained, the frequencies in the Private Land Mobile Radio Services are or soon will be completely "saturated" with mobile units in the major urban areas of this country. These are the same areas which are candidates for UHF sharing in General Docket No. 85-172. By limiting ATV to the current 6 MHz allocation -- a feasible and practical spectrum allocation plan -- it will in all likelihood be

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<sup>3/</sup> LMCC incorporates by reference the Comments and Reply Comments of LMCC and LMCC member associations in General Docket No. 85-172 and MM Docket No. 87-268/RM-5811.



possible for the Commission to move forward with the long-standing UHF Sharing proceeding, thereby ensuring some relief to the spectrum shortage faced by the Private Land Mobile Radio Services.

6. Furthermore, as LMCC has previously pointed out, the need for additional land mobile spectrum is an urgent one. Such urgency is a critical factor not to be overlooked by the Commission. As LMCC noted earlier, it is expected that a minimum of five years will be required to develop equipment to be used for channels shared with UHF-TV.<sup>4/</sup> Equipment manufacturing cannot begin until the conclusion of Docket No. 85-172 and further proceedings required for the development of licensing and technical standards. LMCC Comments, MM Docket No. 87-268/RM-5811, supra, at p. 8. The Commission must act quickly to resolve the issue of spectrum plans for ATV use so that the long-standing UHF sharing proceeding may be revitalized without further undue delay.

7. As the Commission's Notice demonstrates, the existing 6 MHz channel bandwidth available to broadcasters appears sufficient to deliver ATV signals to the American

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<sup>4/</sup> Although it will take at least five years to develop land mobile radio equipment to be used on UHF-TV channels on an across-the-board basis, some equipment currently in use by land mobile licensees may be available for use on certain UHF channels in the near future with minimal adjustment.

public. Numerous researchers have proposed systems that will operate within 6 MHz channel bandwidths including Hitachi, Matsushita, Nippon, Faroudja Laboratories, the Del Rey Group, the Massachusetts Institute of Technology, the David Sarnoff Laboratories and NHK (Japan Broadcasting Corporation). See Commission's Notice at pp. 15-17. These researchers describe ATV systems that would significantly improve television system quality, but would not require an increase in bandwidth. Thus, there is more than simply an unknown potential for developing ATV systems within the existing 6 MHz broadcast channels; improved systems have already been simulated.

8. In light of the critical need of the land mobile community for additional spectrum, the Commission should limit the amount of spectrum available for use in connection with ATV to that which is absolutely necessary -- the existing 6 MHz channel bandwidths available to broadcasters. By so doing, the Commission will promote spectrum efficiency and the development of improved broadcast signal quality and, at the same time, will allow for increased UHF sharing to help relieve the critical and growing need for additional spectrum in the Private Land Mobile Radio Services.

9. Furthermore, as LMCC has previously noted, there are other important reasons for limiting ATV systems to 6 MHz

of spectrum including economic and practical considerations. See LMCC Comments, MM Docket No. 87-268/RM-5811, supra, at pp. 10-12. Likewise, the Commission in its Notice, recognized the virtues of 6 MHz ATV systems, pointing out that (a) such systems would be fully compatible with the NTSC system; (b) 6 MHz ATV systems would have a relatively small economic impact on broadcasters, cable operators and consumers inasmuch as the 6 MHz system "would not require broadcasters to replace or add transmitters, nor would it require cable operators either to expand channel capacity or to discontinue any existing service. Existing receivers would be unaffected by the new signals and new ATV receivers would be able to process either NTSC or ATV signals"; (c) future assignment of additional full service television systems would be possible; (d) LPTV and TV translator stations that operate on a secondary basis would not be displaced; and (e) 6 MHz ATV systems "might provide opportunity for additional non-broadcast use of the UHF band." The Commission also noted that "the transition to ATV might occur more rapidly than otherwise" if a 6 MHz spectrum option were implemented. See Notice at pp. 38-39.

10. Admittedly, there are some virtues to the alternative ATV spectrum plans proposed by the Commission. However, when weighed against the benefits of its proposal to limit ATV systems to the existing 6 MHz bandwidths currently

available to broadcasters and the fact that adoption of this proposal could provide the private land mobile radio community with long awaited spectrum relief, it is clear that the Commission should move forward with this approach.

B. Supplemental Spectrum Allocated For ATV  
Should Be Allocated On A Temporary But  
Fixed Basis for Non-ATV Use by Land Mobile  
Radio Users

11. While LMCC shares the Commission's concern that spectrum not lay idle while the demand for ATV develops, it does not fully support the Commission's proposal for use of supplemental spectrum that may be allocated to ATV. The Commission proposes that use of supplemental spectrum for non-ATV purposes be permitted for an interim period subject to the discretion of each licensee. See Notice at p. 66. This would effectively permit broadcasters to "sell" spectrum to land mobile radio users, and to condition the terms pursuant to which the supplemented spectrum could be used for non-ATV purposes. Thus, for example, a private land mobile radio user with critical needs to access additional spectrum may be required to compensate a broadcast licensee for use of unused ATV spectrum.

12. LMCC urges the Commission to reconsider the terms which should govern the use of dormant ATV spectrum. It is inappropriate as a regulatory matter for an entity such as a

Private Land Mobile Radio Service eligible to be forced to compensate a broadcast entity, licensed in a completely different service, for use of spectrum unused by a broadcaster when the broadcast licensee itself was not required to pay for the spectrum in the first instance.<sup>5/</sup>

13. LMCC urges the Commission to adopt an alternative plan for use of any supplemental spectrum it may allocate for ATV purposes. Specifically, the Commission should allocate the spectrum for a temporary, but fixed period of time to non-broadcast entities with a demonstrated need for additional spectrum such as land mobile radio users. This would help alleviate the critical demand faced by the land mobile community for additional spectrum. Furthermore, a temporary allocation of UHF spectrum to land mobile radio eligibles for use while ATV is developing would eliminate various problems associated with the flexible allocation proposal set forth in the Notice including (a) who can use the dormant spectrum; (b) when such use can be made; (c) what channels can be used; and (d) what terms will govern, e.g. pricing and "landlord - tenant" relations. A temporary but fixed allocation of

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<sup>5/</sup> Additionally, by providing supplemental frequencies to existing broadcast licensees without allowing competing applications by land mobile radio entities, the Commission's proposal also raises serious due process issues pursuant to Ashbacker Radio Corp. v. FCC, 326 U.S. 327 (1945).

spectrum would afford land mobile radio users with the stability necessary to making maximum use of the frequencies. With the assurance that they will have access to certain frequencies for a set, albeit-limited, period of time, land mobile radio users will be willing, and in fact anxious, to develop and/or purchase the necessary equipment.

14. Inasmuch as there is no workable timetable for the implementation of ATV, LMCC recommends that should the Commission set aside supplemental spectrum for ATV, it allocate the supplemental spectrum to the Private Land Mobile Radio Services for a minimum of 10 years, the equivalent of two license terms. At the end of the adopted time frame, should ATV require additional spectrum, the land mobile radio community would no longer be permitted access to the spectrum to the extent it is required for ATV. In the event additional spectrum for ATV has not proven necessary by that time, land mobile radio entities should be permitted to use the frequencies indefinitely.

### III. CONCLUSION

15. The Commission should adopt its proposed spectrum plan whereby no additional spectrum beyond the existing 6 MHz television bandwidth is utilized for ATV systems. It is clear that ATV systems can operate within a 6 MHz bandwidth. Furthermore, accommodating HDTV technology within the existing 6 MHz

television bandwidth would enable the Commission to move forward with its long-standing UHF Sharing proceeding which promises to provide much-needed relief for the Private Land Mobile Radio Services. In sum, adopting a 6 MHz standard for ATV would allow the American public to receive the benefits of both ATV and UHF sharing.

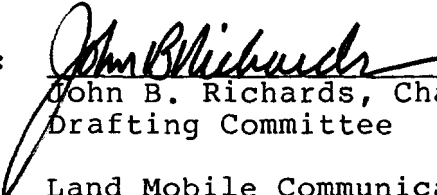
16. Finally, the Commission should revisit its proposed flexible allocation plan. Should the Commission conclude that supplemental spectrum should be allocated for ATV systems, it should revisit the issue of permitted uses of such supplemental spectrum for non-ATV purposes while the demand for ATV develops. Specifically, LMCC supports an approach whereby the supplemental spectrum is allocated to non-broadcast eligibles such as land mobile radio users for a temporary but fixed period of time, e.g. 10 years. At the end of this time frame, broadcast licensees would have access to the frequencies for ATV should the need for additional spectrum develop.

WHEREFORE, THE PREMISES CONSIDERED, the Land Mobile Communications Council urges the Federal Communications Commission to proceed in a manner consistent with the views expressed herein; and to move forward expeditiously with the decision in this and the UHF-TV sharing proceeding.


Respectfully submitted,

Joseph Y. Nasser  
President  
LAND MOBILE COMMUNICATIONS COUNCIL

By:

  
John B. Richards, Chairman  
Drafting Committee

Land Mobile Communications  
Council  
1150 - 17th Street, N.W.  
Suite 1000  
Washington, D.C. 20036  
(202) 956-5600

  
Nina M. Binstein  
1150 17th Street, N.W.  
Suite 1000  
Washington, D.C. 20036  
(202) 956-5600

November 30, 1988